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# DEMONSTRATION

OF



# NECESSARY CONNEXION.

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By JOHN FEARN,

AUTHOR OF "AN ESSAY ON CONSCIOUSNESS," IN *SECOND EDITION*;  
OF "A DEMONSTRATION OF THE PRINCIPLES OF PRIMARY VISION,"  
AND OTHER PUBLICATIONS.

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# DEMONSTRATION

OF

## NECESSARY CONNEXION.

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**T**HERE is a vast momentous difference between the avowed decision of Philosophers, that we can trace no instance of necessary connexion between any two successive phenomena ; and another opinion, very lately re-asserted by high authority, that “ in the inferences drawn *concerning the invisible things of God from the things which are made*, there is a perception of the “ understanding implied, for which neither reasoning nor experience is sufficient to account.”

Were it not the purpose of this Paper (how *strange soever* it may sound) to DEMONSTRATE *necessary connexion itself* ; I should, at any rate, think it *erroneous*, as it certainly is *fraught with sustenance for the most dismal Scepticism*, to resolve our notion of causation, (such, even, as it hitherto has been) into “ A SELF-EVIDENT PRINCIPLE,” or, to refer it to “ AN ORIGINAL LAW OF HUMAN BELIEF.”—Besides the *use* to which designing Sceptics may always turn such a position, in misleading those of the MASS of mankind who are ruled by them in regard to speculative opinion ; I consider it as undeniably not only leaving open a door for Scepticism in those who attend to the subject with any depth of thought ; but, as tending to sharpen the sting of doubt in any such bosom where it has once found entrance.—Some of the reasons for this opinion I will therefore here submit, previously to proceeding to my subject.

FIRST.—If philosophers had never made any discoveries of truths, beyond what are known by the vulgar, it would at this hour be confidently pro-



nounced "*a self-evident truth*" that there is *an absolute UP and DOWN*, and that we walk with our heads upward. And, I assert, it is as easy (if not more easy) for any ordinary man to believe that a Ball might begin to roll without any cause at all, as to conceive that he is mistaken as to his notion of UP and DOWN.

SECONDLY.—There cannot be a more universal notion, or a more *apparently self-evident truth*, than that the FIGURES we perceive are the *identical limits of external things around us*: And, even, a high school of philosophers maintains that this is A TRUE INSTINCTIVE NOTION, *proclaiming a great truth in nature*.—But, I have very recently reduced it to a *mathematical proof*, that perceived Figure is the NECESSARY CREATURE of TWO COLORS in the mind.

Thus it is manifest, that Providence serves and guides us, in many cases, before reason can explore *far*; (and even sometimes *after*) by letting us acquire notions that are as irresistible, as they are universal in our species; but yet, which philosophy has in many instances proved to be utterly void of truth in external nature.—And, therefore, no ground of belief can be more *questionable*, than that upon which many of our most inveterate notions rest.—Now let us observe, that this is precisely what Mr. Hume has charged upon our *hitherto* notion of causation; namely, that it is a mere "*determination*" of the mind, without any knowledge of the fact itself; since we have never detected an instance of it.—And thus, *for all that* INSTINCT can tell us of CAUSATION, more than of UP and DOWN, the notion MAY possibly be worth nothing at all beyond its present utility; and, it is this *possibility*, which perhaps some minds interpret PROBABILITY, that is the dismal plea to which Atheistical Scepticism desperately clings, in regard to the present subject.

Nor, even, in the *best conceivable case of such an instinctive notion*, could the INSTINCTIVE GROUND be made satisfactory to stand upon. For, if it be (for argument sake) supposed a *true instinctive belief*, that a Ball, when it moves, *must* be moved by *some cause, as the laws of Nature are* NOW CONSTITUTED; yet, how could this help us to judge causation to be *self-evidently* NECESSARY, (that is by an ETERNAL *law*) so long as we find it *self-evidently easy* to CONCEIVE IT NOT TO BE; which contrary conception is readily granted by the School here opposed.—And here we are to observe, that it is not the *contingent cause*, but the *necessity*, (the eternal infallible result) that Mr. Hume demanded to have proved.—Now, no man will assert that any "*original law of human belief*" gives us any *proof*, or any the least

*hint*, of any such *necessity*.—And, therefore, the latest report in the Philosophy of the Mind, in regard to the state of our knowledge of causation, is, *when examined to the bottom, virtually no better than a reiteration of HUME's grand sceptical objection.*

Mr. HUME, himself, would admit nothing short of “*an instance of a cause where we discover the power or operating principle.*” And no man since his time has taken up his gauntlet.—Here I must repeat, I think a better alternative might be found, than proposing an *original instinctive belief* of the thing. But a very different purpose is here intended; and it may be expected to awaken a sensation of curiosity, when one who joins his full assent to the general voice, that no instance of connexion has ever been discovered between any two of the phenomena wherein it has *hitherto been most supposed to exist*; yet, declares his clear conviction *that, in a field newly explored, the FACT of NECESSARY CONNEXION stands one of the most obvious of all demonstrated truths.*

If this shall be established; then, besides its vast interest in Science in general, its importance to THEOLOGY must be infinite. For, the objection started by Mr. Hume does not go to deny that *Secondary Efficient*s must hang upon some SELF-EXISTENT PRIMARY EFFICIENT, provided it were ONCE PROVED *that things hang upon each other, at all.* And the only sound objection to Dr. Clarke's argument for a Self-existent First Cause, is, that he ASSUMED the “*dependence*” of things, one from another, *without being able to PROVE a single instance of it.*—All, therefore, that we have to do, to prove, *by that abstract argument*, the being of A SELF-EXISTENT FIRST CAUSE of *all things*, is, to produce “an instance wherein one event must follow from another *as an infallible consequence.*”

That the first proposal of such a proof should excite as much incredulity as surprise, is to be expected. But, fortunately, the truth of the propositions is so intuitively obvious, that the slightest attention must discern it; and, from the nature of the subject, it is to be hoped that attention will be afforded to them by every person who is in the least degree interested in general knowledge,

In this case, considering the vast moment of the subject providing any real advance has been made; and, adverting at the same time to the fitness of not neglecting present opportunity; I must venture to rely upon the “*DEMONSTRATION of the PRINCIPLES of PRIMARY VISION,*” which I made public but a few days ago, as a speculation which, being bedded in mathematical truth, cannot fail until such truths become reversed.—My

especial reason for reliance on this is, the striking obviousness of the steps in the proof; which leave not the least opening for doubt. And, if my confidence therein be found warrantable; then, I must beg to say, *the said* "PRINCIPLES OF VISION" *form, of themselves, no less than a DEMONSTRATION of NECESSARY CAUSATION.*—In the FOUR LAWS OF VISION therein stated, (which, be it observed, are at the same time MATHEMATICAL PRINCIPLES) the following facts stand so manifestly in necessary connexion, that it seems impossible any one can miss to discern it.—The reason for stating the proof here again, in a distinct tract by itself, may be obvious. It is because, in the Demonstration of the Principles of Vision it stands *only as an involved matter*, and does not form the principal object of that speculation; whereas, its own intrinsic importance highly demands it to be viewed by itself, as a matter of the first magnitude; at the same time that its appropriate proof takes in various considerations which are not applicable in the matter of Visual Perception.

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#### NECESSARY CONNEXION IN PERCEIVED FIGURE.

FIRST.—It is neither ever known, nor ever conceivable, that any perceived Visual FIGURE can exist, if no Sensation of Color at all exist in the perceiving mind.

It is as mathematically possible for an *infinite Line* to have a *termination*; or, for an *infinite surface* to have a *boundary*; as for a visual FIGURE, or LINE, to exist unless SENSATIONS of Colors exist.—But, Sensations of Colors can, and often do exist, (*blended,*) without any perceived Figure existing.\*

Every man who reflects but a moment, must find this so self-evident, that no words can make it plainer.

SECONDLY.—If we have ONLY ONE color in the mind, it is unknown, and inconceivable, that it can cause visual Figure. For FIGURE is BOUNDARY; and I have demonstrated, under all the Four Laws of Vision, that visual perceived boundary or Figure, is *the NECESSARY result of the*

\* See the Fourth Law of Vision, in the Demonstration of Principles.

MEETING OF TWO SENSATIONS OF COLORS, *perceived by the SENTIENT.*

**THIRDLY.**—It is equally demonstrated, (in the “Principles”) that if two Sensations of Colors be supposed, by extravagance, (*say by a Humist*) to exist side by side, without any connexion, or, if he please, without any acquaintance with each other; *this could never give existence to any perceived visual Figure, at all*; since it is shewn that Figure is *not Color, nor Colors at all*, but, is a CREATURE OF CONSCIOUSNESS *without Color*; of which, the Two connected Colors, therefore, are NOT ELEMENTS, but are strictly CO-EFFICIENTS.—And it is equally shewn, that THESE TWO Co-efficients could not of themselves give existence to any Figure; since it is the VERY FACT of SOME SENTIENT BEING FEELING WHERE one Color IS NOT THE OTHER, that CREATES *any visual perceived Figure, at all.*

This last mentioned most important point of the Demonstration, proves not only NECESSARY CONNEXION between Two different species of phenomena; but, it farther most signally demonstrates the NECESSITY of a THIRD CO-EFFICIENT in the production of the latter; and, that this THIRD co-efficient must OF NECESSITY be A SENTIENT BEING, taking cognizance of the other TWO CO-EFFICIENTS.

Let any man now, for a moment, contrast the KIND of causation here demonstrated; against the nature of contingent physical causes.—VISION is a PHYSICAL subject, most certainly. And, in discovering that *Visual Figure* has a necessary cause, we must hereupon and henceforward discriminate, that physical causes are not all contingent; though the hitherto best reputed of them still appear to be so, if they are causes at all. Let us, for instance, take IMPULSE as the physical cause of MOTION: and here, every man can conceive the effect *not to follow*: it is merely an uniform observed conjunction, the contrary of which might in future happen, for all that human reason can object. But now, every man must intuitively discern, that it is *mathematically and eternally impossible that Visual Figure* can exist without any COLOR; or, that it can exist with any ONE COLOR; Or, that it *can ever fail to exist when the SENTIENT feels TWO well defined COLORS in co-existence.*

In a word, all these are mathematical truths, whose contraries are as impossible as that of any Demonstrated truth: And it is impossible to hesitate about them.

Moreover,—The identity of the CAUSE (which in this case is a compound one, being made up of Co-efficients) is here signally conspicuous; which, also,

renders the *identity of the EFFECT* equally conspicuous.—For, the SENTIENT often manifests *its existence* in perception, without perceiving Colors at all: and, it may often perceive COLOR, and even *several blended COLORS*, with a present conviction that they *neither DO, nor CAN* cause perceived *Figure*.—And thus we find, the CO-EFFICIENTS of visual Figure may, *all of them, exist in different modes, without the existence of perceived Figure*. But perceived *Figure cannot possibly exist unless all the Co-efficients act together*: and then, its existence *can no more be conceived to fail, than a Triangle, or a Circle, can be denied of all its properties*.

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### NATURE OF THE THINGS IN WHICH CAUSATION IS HERE DEMONSTRATED.

Here we are to note, that the *phenomena* thus necessarily produced, are no other than IDEAS, that is to say *Ideal Figures*: they are mere *Thoughts*, or *Conscious Phenomena of the SENTIENT*.—But let us also observe, that our *Ideas* are not less truly *phenomena* than any other phenomena we know.—*Colors and Figure* hold equal rank, in this respect, with *impulse and motion*; and there is as much *difference* between the two *first*, as between the two *last*. And visual Figures, though they are now demonstrated to be *only Ideas*, are in themselves no less than those things to which the philosophy of REID has assigned an external existence, as making up the great world around us.—No Philosopher, not even HUME, makes any distinction between causes on this ground. Hume, says “We search for the idea of “agency in vain in all the objects which are presented to our sense, or which “we are internally conscious of in our minds.”—And again,—“We have no “adequate idea of power or efficacy in any object: since neither in body “nor spirit, neither in superior nor inferior natures, are we able to discover “one instance of it.”—Moreover, as Mr. Hume believed that we *perceive nothing but our perceptions*; and, that *nothing appears requisite to support a perception*; it is clear he must have denied causation in IDEAS *especially*. And, therefore, a *proof of the contrary in IDEAS, themselves, is the highest, and indeed the only proof that could explode Hume’s Scepticism*.

Besides all this, let us return to the consideration, that the *Theory of Reid*, (to whose philosophy the Demonstration of the Principles of Vision,

as well as the present speculation, must prove so fatal,) considers Sensations of Colors, and the Figures which attend them, to be two species of phenomena, *not only different*, but to be so *foreign* to each other, as to be, the former *in the mind*, and the latter *out of it*; *without even any one property in common*.—Nay, it is asserted by *Dr. Reid*; and maintained by *Professor Stewart*, in the First Volume of his “*Elements*,” Chap. 1. Sect 3. “*that all the steps of this process* (of perception) *are equally incomprehensible*; and that, *for any thing we can prove to the contrary, the connexion between the Sensation* (of Color) *and the perception*” (of Figure) *may be arbitrary*.”—This proves how vastly *different* are the two phenomena, according to *that School*.—But, as to the *connexion being* “*ARBITRARY*,” need I repeat here, that it is over and over again *demonstrated*, that the *connexion is not arbitrary*, nor can its contrary be conceived. And, therefore, necessary causation is here proved to exist, between two phenomena which are as different, each from the other, as they are important in themselves.

FINALLY, let us for a moment contemplate the *nature* of the things between which necessary causation is here manifest.—*They are no less than A SENTIENT BEING, (our own Sentient) together with TWO OF ITS SENSATIONS OF COLORS; which THREE CO-EFFICIENTS, GIVE EXISTENCE to PERCEIVED FIGURES, as their EFFECTS; which figures make up to us, all the infinite variety and sum of EXTENDED FORMS of VISIBLE CREATION: which Visible Creation, doubtless, results from AN EXTERNAL CREATION; and, from the bodies of which last, the light is reflected upon our eyes, and causes those visual SENSATIONS that betray Figures.*

Here, then, let us mark, if there can be any thing more satisfactory to Human Understanding, than that we should be able to discover CAUSATION between PERCEIVED FIGURES *which are COPIES of EXTERNAL THINGS CAUSED BY GOD, and OUR OWN SENTIENT which thus, BY ITS GIFTED EFFICIENCY, necessarily becomes A MIRROR of that EXTERNAL WORLD.*

The Scientific reader will instantly discern, that this demonstration restores, or rather only confirms, that *doctrine of RESEMBLANCES, and that Theory of Perception*, for which both Locke and Newton have been held up as being in a deplorable error.

## NECESSARY CONNEXION IN EXTERNAL FORMS.

With a view to give additional interest to the foregoing Demonstration; and, because it may the more readily gain the attention of a much larger class of scientific readers, who might otherwise be slower to enter into the merits of PRIMARY VISION; I will here venture to touch upon *another* and *very different* field, namely, AN EXTERNAL ONE; in which, I must think, necessary causation is as certainly demonstrable, as it has been in VISION *itself*.—At the same time, it is a matter I can attempt but very partially; and, without pursuing its involved considerations. And, even this would not have been broached here, but owing to my earnest desire to follow up, with all possible effect, the “PRINCIPLES OF VISION:” (so often unavoidably alluded to in this paper,) so as to kindle a *general interest* in the study of *the-phenomena of the mind*; and, to lay a *firm foundation* of ANTISEPTIC PHILOSOPHY.

To begin this matter: It will, I suppose, be granted by mathematicians, that the SIDES of a Square, or Triangle, are all DIFFERENT things from the ANGLES they contain; and, that the like holds good in all EXTERNAL *things*, in *Houses*, in *Garden Walls*, in *Ink Diagrams*, and in other *material Enclosures*; as well as in pure mathematical *Conceptions* of the mind.—But, it is now to be submitted, whether NECESSARY CAUSATION be not demonstrable in all the external objects above named: and, no less so, even in INTELLECTUAL CONCEPTIONS *themselves*.

The Test of the matter, according to Mr. HUME, is this: “ANY THING *may produce* ANY THING.”—Now if this be so, we may *conceive* AN ANGLE as existing by itself, *without any* LINE; and then, conceive this LINELESS ANGLE to PRODUCE *Lines*!!!

It must be quite sufficient, here, to ask mathematicians, whether this is *conceivable*; or, whether its *eternal impossibility* is not *self-evident*?

Now, NECESSARY CONNEXION is here so undeniably manifested between the ANGLES and the SIDES of all *extended Formations*, both *external* and *intellectual*; that all I have more to do, is, to argue that ALL *Sides* and *Angles* stand really to each other in the relation of CAUSE and EFFECT.—This already appears, very simply. But it seems requisite to insist farther upon it here, inasmuch as I am not aware that mathematical definitions point out the existence of this relation. On the contrary, when, for instance, a Tri-

angle, or a Square, is defined; the ANGLES form a *part of the definition*; and they are therefore viewed as *constituent parts or elements* of the whole; and *not as EFFECTS of the other parts*. But, if we would consider an INTELLECTUAL Diagram, in its own nature, as a *physical subject*, (the like as we do a garden wall) I believe it will be found *eternally necessary*, both in the order of our *ideas*, and that of *time*,—necessary in the order of its CONSTRUCTION,—that its SIDES *must exist BEFORE* its ANGLES; and that its ANGLES *MUST NECESSARILY exist the instant that its SIDES exist in certain situations*.

Thus, if with a *Pen and Ink*, upon paper; or, with a *Trowel and Clay*, upon the ground; or, in the pure conception of my *mind*; I form a SIDE, or LINE; then, there will be no ANGLE caused thereby.—But if now I form a *Second SIDE*, inclined upon the first, and meeting it at any point, it *must GIVE EXISTENCE to an ANGLE*.—If I form a *Third SIDE*, joining the two former, this *must GIVE EXISTENCE to Two more ANGLES*.—And thus is formed *every Triangle*.

Here it is highly manifest, in every step, that the SIDES are CAUSES and the ANGLES are *necessary EFFECTS*. The latter necessarily FOLLOW the former; though yet, it is impossible to *conceive the lapse of any time* between the existence of the *cause* and that of the *effect*.

From this process of constructing any EXTERNAL FIGURE; (as well as in that other department and process of causation whereby Two SENSATIONS of Colors produce PERCEIVED FIGURE) it becomes manifest, that REAL EFFECTS are so closely allied, IN TIME, to their CAUSES, that there can be *no sensible idea* of SUCCESSION; though, it is as certainly demonstrable to the Intellect, that the Cause actually does precede the effect, as any thing can be.

But if any person think, because in a *pure conception* of a Triangle he can call up the Three Lines coevally in his mind; that therefore the included Angles are NOT CAUSED, but are *strictly constituted* with the lines; the following considerations point out his mistake.—That ANGLES are EFFECTS, and NOT ELEMENTS or CONSTITUENT PARTS of any extended Form, whether House, Box, Ink Diagram, or pure intellectual Figure, is perfectly plain. For all the elements or constituent parts of any thing, must be supposed *capable of existing by themselves*; they must have no necessary dependence on the other elements. But now, the existence of ANGLES *without SIDES*, either out of, or within the mind, is *utterly inconceivable*: Yet, at the same time, *all the SIDES* may really exist, in *Ink*, in *Wood*, in *Clay*, or in *Thought*, without the existence of any *Angle at all*.



It is simply evident, that the criterion of cause and effect, between two phenomena, is, when the *former* can exist (*of its own nature*) without the *latter*: while the latter *cannot any part of it* exist without the former.

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### NECESSARY CAUSATION IN ALL EXTERNAL RELATIONS, AND IN ALL OUR IDEAS OF RELATION.

It would seem so far from being true, that we have no evidence of EFFICIENCY; that, on the contrary, all Nature appears to abound with evidences thereof.—It has already appeared in Three different grand species of relations; namely, in *all ideal or perceived* FIGURES, as related to *Colors*, which Figures are copies of the things in the external World; in *all ideal conceptions* of ANGLES, as related to *lines*; and in all the EXTERNAL ANGLES which can exist as related to their material *sides*. Here, then, is necessary efficiency, upon a vast and sublime scale: But this is not any thing like ALL the knowable, or known, extent and variety of causation.

Both the external World, and the World within, abound with relations of various kinds. There seems to be nothing either without, or within us, that exists, or can be conceived to exist, in the *nature of a SUBSTANTIVE*, but *must exist* with RELATIONS. But now, I argue, that ALL RELATIONS *must necessarily be* EFFECTS.

AND FIRST, of IDEAS of RELATIONS.—All these IDEAS, I take to be EFFECTS; of which, the SENTIENT ITSELF and TWO IDEAS of SUBSTANTIVES, *must be the* THREE CO-EFFICIENTS.

THUS, IN PHYSICAL IDEAS of Relation, the IDEA of *equality* would be utterly *inconceivable*, if the INTELLECT did not *first conceive* TWO SUBSTANTIVE *ideas*. The two substantive ideas may be of two *animals*, or two *Houses*, as to stature; or, they may be of two *measures of Time*; or, *numerically of two Sounds*, or other Sensations; or, again, they may be two *cubes, surfaces, lines, or points*, of PURE SPACE: any two of these may CAUSE in the mind the IDEA of *equality*. But it is plain, that, without conceiving SOME TWO ideas as SUBSTANTIVES, it is inconceivable to form an idea of *equality*, or of any other relation, between them; any more than we can conceive an ANGLE before we have ever conceived a LINE.

IN MORAL IDEAS, the like must hold.—It is impossible to conceive *injustice*, without *first conceiving* PROPERTY; and, impossible to conceive property, without first conceiving SOME BEING, to whom it relates. And it is

plain that the idea of INJUSTICE cannot *first exist* as a SUBSTANTIVE, and then of itself produce the IDEA of PROPERTY, and the IDEA of the BEING it belongs to, and that of the Being who invades it.

EQUALLY, IN LOGICAL Conceptions:—How could the mind possibly conceive A PROPOSITION, if it did not *first conceive* SOME SUBSTANTIVE *thing* concerning which it affirms, or denies?

It would appear, from all this, that all our ideas of relations *must necessarily have a CAUSE*, or, could not exist of themselves. And, what is more, we can trace the *whole cause*, that is to say ALL the CO-EFFICIENTS. Here, also, it is plain, that THE SENTIENT ITSELF *is always ONE of these; and the other two, are two of its own substantive conceptions.*

It indeed appears too much in Mr. Hume, to demand to be shewn "*the power or operating principle,*" IF *he meant the WHOLE of it.* Because enough, surely, must have been proved, if we could only have shewn that MANY BEGINNING THINGS MUST HAVE A CAUSE; though we could not have shewn ALL the co-efficients.—The difference herein, is this. When we know ALL the co-efficients, we know that the EFFECT cannot remain *any possible time* out of existence. But when we know only SOME of the co-efficients, all we know is, that the EFFECT *cannot take place without this known co-efficient.*—Yet, in this last case we have as *certain proof* of the NECESSITY of a CAUSE, as we had in the first.

Thus, when we perceive two external lines, which, from their situation, CAUSE the RELATION called AN ANGLE; we perceive ALL THE CO-EFFICIENTS of the ANGLE, *necessarily conjoined with the Angle itself.*—And again, when we CONCEIVE an ANGLE in the mind itself; it is by *first conceiving* TWO LINES; which, *with* OUR OWN SENTIENT, are ALL the co-efficients of this intellectual Angle: and here the CONCEPTION OF AN ANGLE *cannot fail to arise* the instant the Sentient conceives these two lines so situated.—But now, we may perceive two *separate lines*, that are *equal in themselves*, without conceiving their EQUALITY; though it is impossible to conceive their EQUALITY without first perceiving the *lines*. In this last case, then, we know NOT ALL the co-efficients of our idea of equality; we only know that our Sentient, and *two conceived lines*, are three of the co-efficients of this IDEA.

To sum up here; What import could possibly be conceived in the terms Equal, Double, Half, Above, Below, Near, Distant, Before, After, and a numberless variety of other such, *What IDEAS could be formed to answer to them, unless every one of such IDEAS be actually AN EFFECT,*

having **ONE SENTIENT** and **TWO SUBSTANTIVE IDEAS** for its CAUSE?

**SECONDLY.—OF EXTERNAL RELATIONS.**—Besides our IDEAS of RELATIONS; when we view EXTERNAL RELATIONS *themselves*, as they exist in nature, it is plain every one of those relations owes its EXISTENCE to TWO SUBJECTS!—Not to attempt to enumerate the variety of external relations here; let us observe, that we cannot even conceive the relation of DISTANCE *between* TWO POINTS OF PURE SPACE, *without* FIRST CONCEIVING THOSE TWO POINTS, as the SUBSTANTIVES which CAUSE the RELATION.

BUT, to place this whole argument in the strongest light, let us observe that certain relations, both *external* and *internal*, strike us more, or oftener, than others; and these are the fittest instances to particularise, for our proofs.

FIRST.—Let us mention that celebrated thing, which has made so much noise, and does so much in the world,—MOTION.—It is nothing but A RELATION. And the MOVING BODY, and SOME OTHER BODY, or POINT, must be TWO OF its CO-EFFICIENTS; while the THIRD CO-EFFICIENT has been sought in vain.—But, whether that Third co-efficient be *impulse*, or *repulsion*, or *ought else*, we know this; *that* MOTION MUST HAVE A CAUSE; because we know two substantive things without which it can no more be conceived, than an Angle can be conceived without lines.

SECONDLY.—But that other relation called an ANGLE, is another most striking phenomenon.—How conspicuous an object it makes, both in science, and in external things, is obvious to all; and yet, it is *nothing but* a RELATION. And we know it is an EFFECT; because *we know* ALL ITS NECESSARY CO-EFFICIENTS, whether it be an *external material* ANGLE, or an *internal intellectual one*.

THIRDLY.—But, perhaps the most familiar and striking phenomenon of all is PERCEIVED VISUAL FIGURE. And we know it is an EFFECT; because we can demonstrate that our SENTIENT and TWO COLORS *are* ALL ITS CO-EFFICIENTS. But, farther, *this* EFFECT is also MERELY A RELATION between its co-efficient COLORS.

AND here, finally, I may confidently assert, that, if we can conceive MOTION *without* TWO SUBSTANTIVES; or, an ANGLE *without* TWO LINES; or, VISUAL FIGURE *without* two COLORS; then can we as easily conceive a

SQUARE *with only* THREE ANGLES; a CIRCLE *whose circumference is a* RIGHT LINE; and, *infinite Space bounded by any Shape we please.*

What then becomes of the famous Sceptic position, that "*any thing may produce any thing?*"—Can MOTION exist first, and then produce its *two Substantives?*—Can a LINELESS ANGLE *exist first*, and then produce the LINES?—Can VISUAL FIGURE exist without Color, and then produce COLORS?

HERE, I would call to general notice, a very curious consideration for the philosopher, (noted elsewhere) and one the examination and understanding of which cannot fail to place the philosophy of PERCEPTION in a new light, agreeably with those "Principles of Primary Vision" so often alluded to herein.—The matter is this;—VISUAL FIGURE is NOT to COLOR, what REAL FIGURE is to BODY.—PERCEIVED FIGURE is ONLY A RELATION between TWO co-efficient COLORS. But the FIGURE OF BODY, is (on the contrary) A MODE of THAT BODY.

To explain this:—Figure is a modification inseparable from every finite BODY, and every finite SPACE. Thus, if we cut a cube in halves; *each half* will retain its *own figure on the cut side*; and the two halves may exist, *each with its Figure*, a thousand miles asunder. But NO SENSATION OF COLOR *can ever exist, by itself*, WITH ANY FIGURE. For one Color, by itself, must be a Color *infinitely extended*: And, it is only by conjunction with a SECOND COLOR that Visual Figure is created.—Thus, *perceived Visual Figure* is NOT A MODE (*or identical quality*) OF ANY ONE COLOR; but, is only A RELATION between the SECOND COLOR and the FIRST.

To discriminate, here, between THESE TWO VASTLY DIFFERENT KINDS OF FIGURE, is infinitely necessary in order to understand the nature of PERCEPTION.

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### CONCLUSION.

It is a very remarkable fact in the *History* of the subject, that when Hume started the position, that "*nothing appears requisite to support a perception*," (by which position he considered both CAUSATION, and the *existence of the mind*, placed in doubt) he thus, at one dash of his pen, *excluded the WHOLE INTELLECTUAL WORLD OF RELATIONS*; besides forgetting the *external relations in nature*.—Had Mr. Hume NOT fallen into this monstrous

oversight, he must have discerned that *every idea of relation demands a Cause*; and, also, demands A SENTIENT for one of its co-efficients. And he must, farther, have discerned that *external relations* equally demand a cause.—In the “PRINCIPLES OF VISION,” I proved the existence of the Sentient, as a THIRD Substantive co-efficient, by proving that VISUAL FIGURE is nothing but A RELATION to its COLORS. And, I therein pointed at Mr. Hume’s oversight, of supposing ALL our ideas as existing *unconnected*; while all our ideas of relations are, manifestly, CONNECTING LINKS of our substantive ideas.—But, in the present speculation it is evident, that *every instance of an IDEA of relation, in all the departments of our ideas*, equally proves the Sentient to be a Third Substantive Co-efficient.

But now, if it was unaccountable in the Sceptical mind of *Hume*, to have shut out the sublime intellectual world of ideal relations, from his philosophy: How much more so does it appear, that enlightened Philosophers since his time, with all intents to refute him, should never have resorted to the world of relations, to seek either for CAUSATION, or for a proof of their *Sentient Substantial existence*? On the contrary, instead of their having done this; how dismal is the prospect they hold out to us, if the present speculation of an isolated individual shall be judged as unfounded, as it is solitary? For, in this case we shall have no notion of ANY CAUSE, but what is given us ORIGINALLY, by INSTINCT;—and, no evidence of the SUBSTANTIVE EXISTENCE of our SENTIENT, but from this INSTINCT;—and, NO EVIDENCE of the EXISTENCE OF GOD, but from the same ORIGINAL INSTINCT: for it is very recently declared, as the suffrage of philosophers, that both “REASONING and EXPERIENCE are insufficient to account” for any of these notions.

Now, it is confessed by the INSTINCTIVE SCHOOL, that *their* instinctive notion of ANY CAUSE, does not exclude the notion of ITS CONTRARY, as being CONCEIVABLE. But, the causation herein now demonstrated, has the same NECESSITY as MATHEMATICAL TRUTH; and its contrary is utterly inconceivable.

It is for men of every class to judge the difference between these two.

END.

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